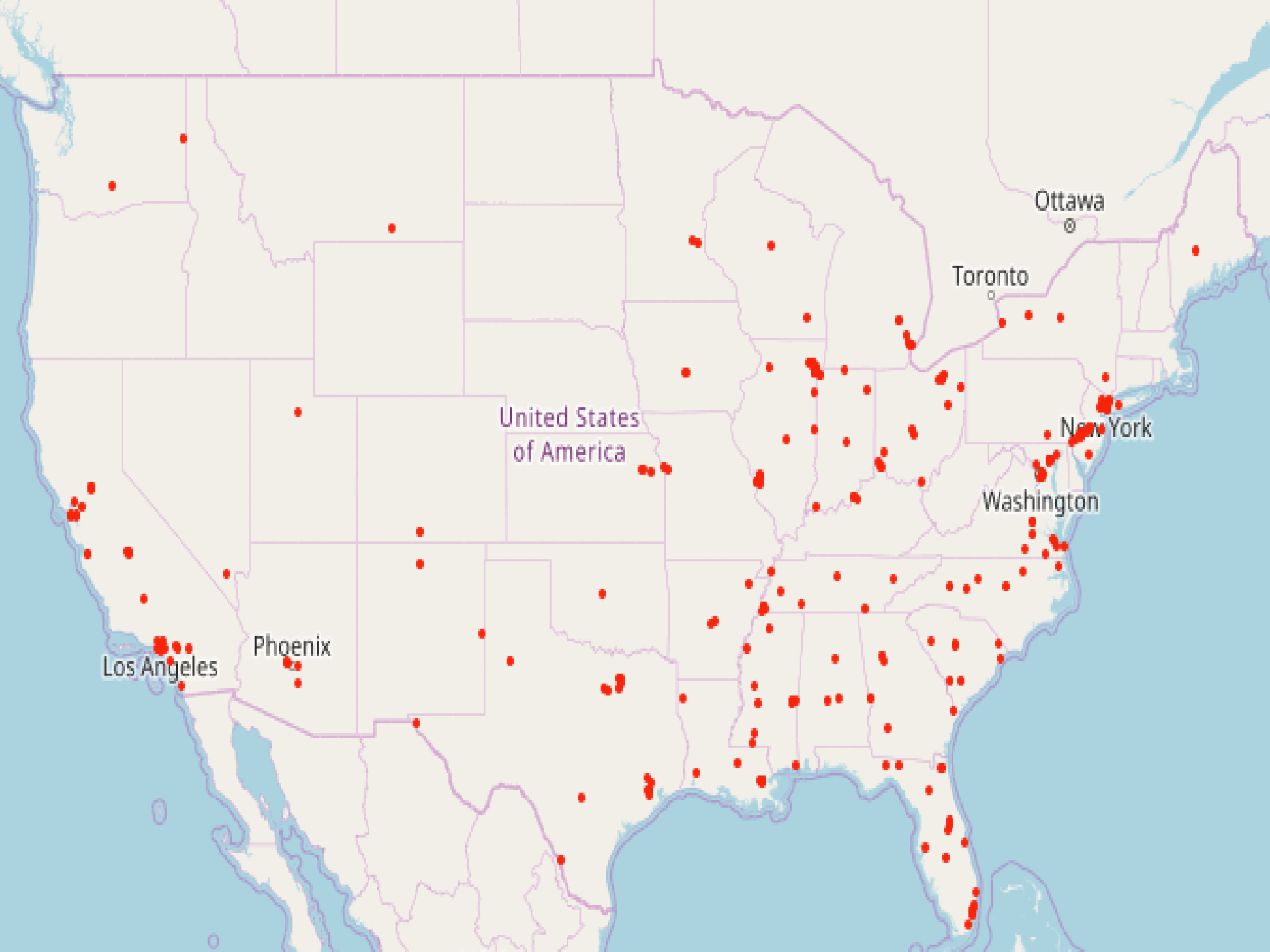


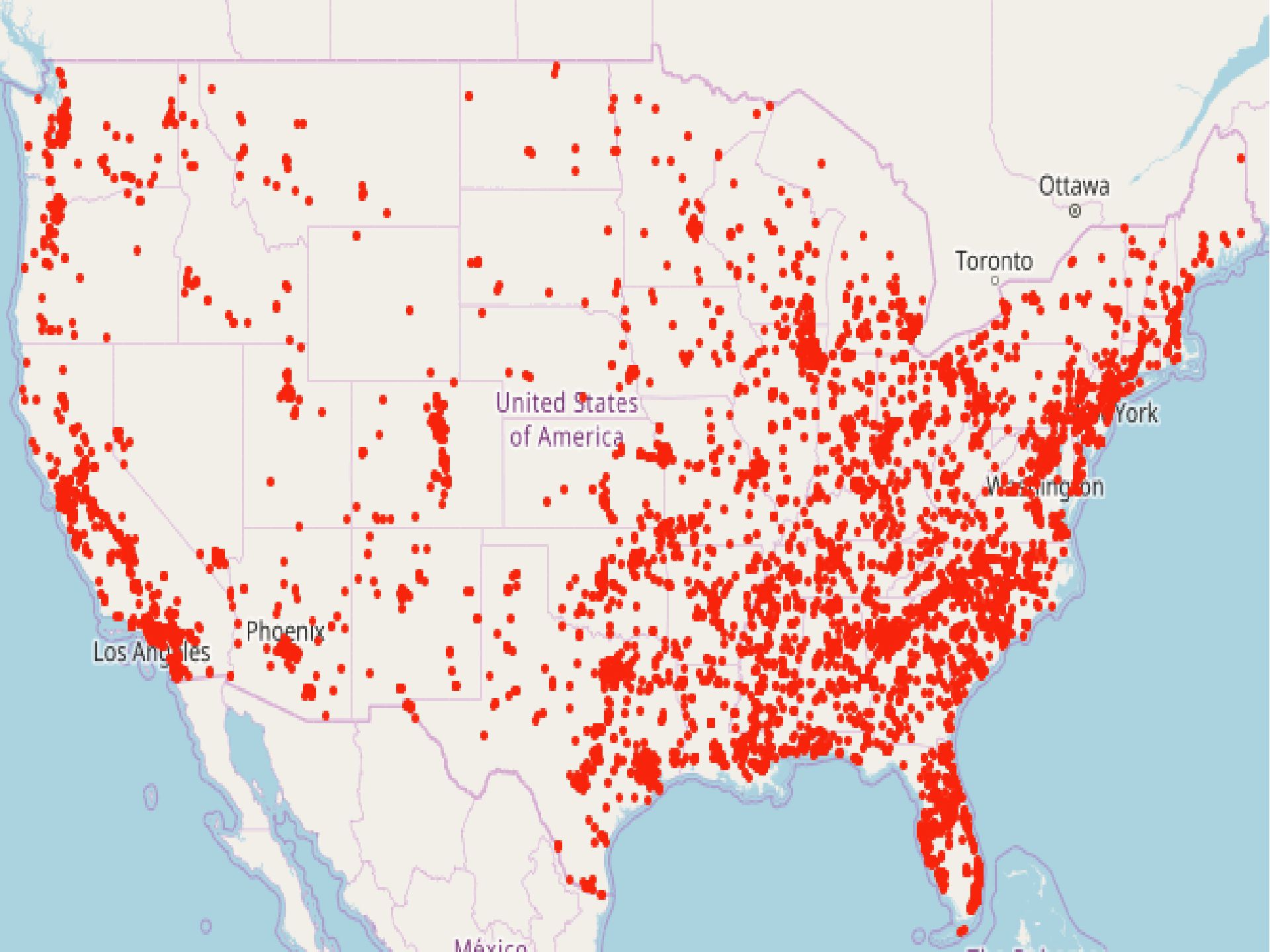


Emergency Medical Services in Crisis Events

What you need to know

Lt. Hugh O'Donnell, VT State Police
Dan Batsie, VT Dept of Health





Not if...when

A photograph showing two police officers in tactical gear. One officer is standing behind a dark blue Chevrolet SUV, holding a handgun up towards the sky. The other officer is crouching in the foreground, also holding a handgun. The scene is outdoors on a street with a light blue pickup truck in the background. Yellow crime scene tape is visible. The text "Our approach has changed" is overlaid in yellow on the right side of the image.

Our approach
has changed



11:57:20 AM 04/20/99







There are inherent dangers



2017

**Vermont
Emergency Medical Services**

**EMS in the Warm Zone
Active Threat Best Practice Guide**

5/23/17

- Protocols to improve safety
- Optional
- Best practices
- Starting point for collaboration





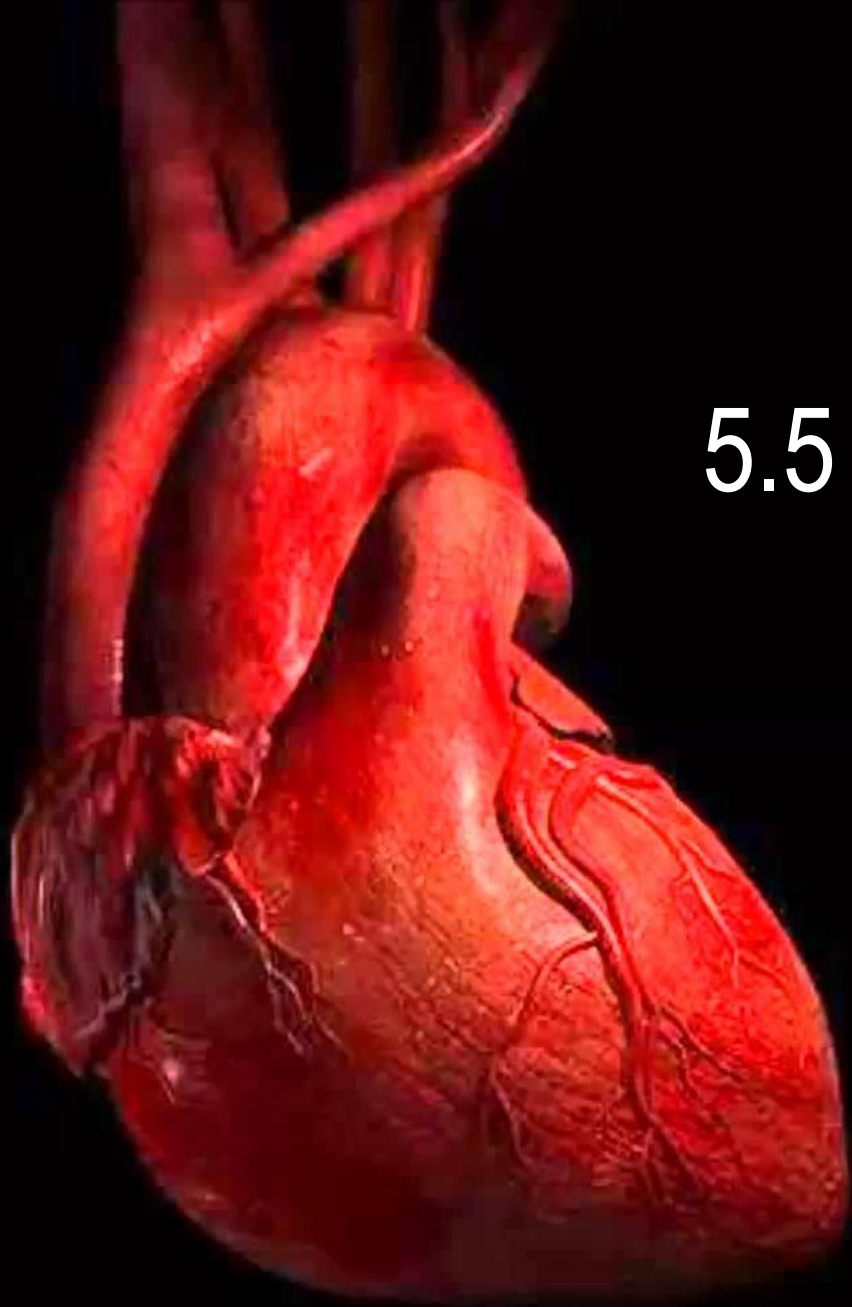
Treatment under fire

- Triage
- Bleeding control
- Chest injuries
- Evacuation





But there is a problem.



5.5 L per minute

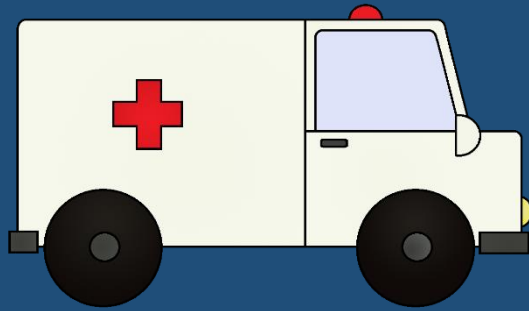
11 L per minute

Reality

*Transected thoracic aorta (31-33mm) loses 100% of blood volume in **23 sec.***

- Common femoral artery (6-10mm)
- Brachial artery (4-5mm)





0-8 minutes

8-12 minutes

13+ minutes

Its not us...

243 injured

- 17 amputations
- 12 lower extr. major vascular injuries.
- 29 recognized extremity exsanguination



How many died?

Among all 243 patients,
mortality was 0%.





No matter how rapid the arrival of professional emergency responders, bystanders will always be first on the scene. A person who is bleeding can die from blood loss within five minutes, so it's important to quickly stop the blood loss.

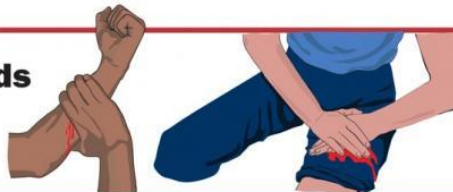
Remember to be aware of your surroundings and move yourself and the injured person to safety, if necessary.

Call 911.

Bystanders can take simple steps to keep the injured alive until appropriate medical care is available. Here are three actions that you can take to help save a life:

1. Apply Pressure with Hands

EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with both hands if possible.



2. Apply Dressing and Press

EXPOSE to find where the bleeding is coming from and apply **FIRM, STEADY PRESSURE** to the bleeding site with bandages or clothing.



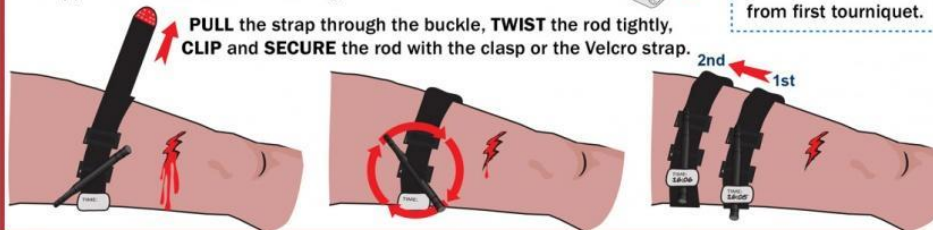
3. Apply Tourniquet(s)

If the bleeding doesn't stop, place a tourniquet 2-3 inches closer to the torso from the bleeding. The tourniquet may be applied and secured over clothing.



If the bleeding still doesn't stop, place a second tourniquet closer to the torso from first tourniquet.

PULL the strap through the buckle, **TWIST** the rod tightly, **CLIP and SECURE** the rod with the clasp or the Velcro strap.



The 'Stop the Bleed' campaign was initiated by a federal interagency workgroup convened by the National Security Council Staff, The White House. The purpose of the campaign is to build national resilience by better preparing the public to save lives by raising awareness of basic actions to stop life threatening bleeding following everyday emergencies and man-made and natural disasters. Advances made by military medicine and research in hemorrhage control during the wars in Afghanistan and Iraq have informed the work of this initiative which exemplifies translation of knowledge back to the homeland to the benefit of the general public. The Department of the Defense owns the 'Stop the Bleed' logo and phrase - trademark pending.



Homeland
Security

Office of Health Affairs

Direct Pressure







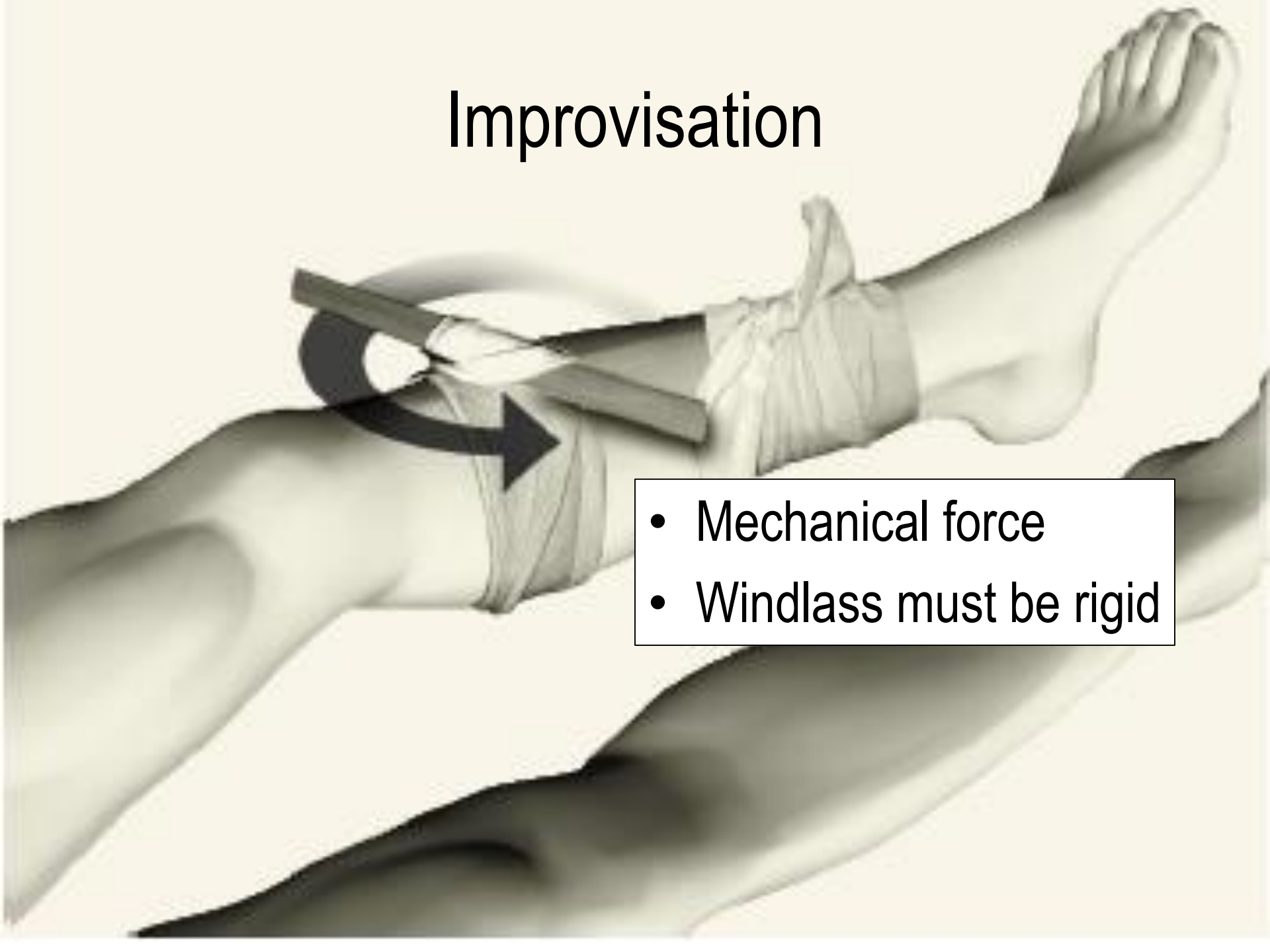




Bulger E, et al. An evidence-based prehospital guideline for external hemorrhage control: American College of Surgeons Committee on Trauma. Prehosp Emerg Care. 2014 Apr-Jun;18(2):163-73.

- *Use a commercially produced windlass, pneumatic, or ratcheting device.*
- *Do not use of narrow, elastic, or bungee-type devices.*
- *Improvised tourniquets used only if no commercial device is available.*

Improvisation



- Mechanical force
- Windlass must be rigid



How Tight?



Remember tourniquets hurt



Where to go from here





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